

Remarks

As a result of this Amendment, claims 1 and 28 have been amended. Claims 1-34 remain pending in this case and are believed allowable over the art of record. The title of the present application has been amended and is believed descriptive of the invention. Reconsideration of the application is respectfully requested in light of the above amendments and in consideration of the following remarks.

A. Objection to Title

The title of the present application has been amended to address the concerns raised by the examiner. Specifically, the title now reads "NOTIFICATION OF TIME-CRITICAL SITUATIONS OCCURRING AT DESTINATION FACILITIES," which is believed to be clearly indicative of the invention recited in claims 1-34.

B. 35 U.S.C. §102 Rejections

In the Office Action, claims 1-34 were rejected under 35 U.S.C. §102 as anticipated by the following three references: United States Patent No. 5,961,561 ("Wakefield, II"), United States Patent No. 6,370,454 ("Moore") and United States Patent No. 4,697,243 ("Moore et al."). A claim is properly anticipated under 35 U.S.C. §102 *only if each and every element* as set forth in the claim is found in a single prior art reference. See Manual of Patent Examining Procedure (MPEP), at §2131.01 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed.Cir. 1987) (emphasis added)). Moreover, this single prior art reference must teach the identical invention in *as complete detail* as recited in the claim at issue in order for the claim to be anticipated. See MPEP, at §2131.01 (citing *Richardson v Suzuki Motor Co.*, 868 F.2d 1226, 1239 (Fed.Cir. 1989) (emphasis added)). It is respectfully submitted that none of these cited references anticipate any of the claims of the present application because each claim recites at least one limitation that is neither taught nor suggested by any one of these single references. Prior to addressing applicability of Wakefield, II, Moore and Moore et al. to these claims, general overviews of the present application as well as each of these references are provided.

1. Present Application:

In general, the present invention relates to alerting a management system of time-critical situations occurring at a destination facility being served by one or more field service

representatives under control of the management system. To accomplish this, data related to the destination facility is collected and analyzed by a central facility to determine whether a time-critical situation is occurring at the destination facility. The time-critical situation may relate to any type of service being performed by field service representatives at the destination facility. In a specific embodiment, for example, the time-critical situation may relate to operation of a utility device, wherein the utility device is malfunctioning in some manner. If the analysis by the central facility concludes that, indeed, a time-critical situation is occurring at the destination facility, the present invention provides an appropriate field service representative with notice of the time-critical situation so that the situation may be timely addressed.

2. Wakefield, II

Wakefield, II is generally directed to a software program (referred to in Wakefield, II as "TDP system") for remotely monitoring and controlling operation of an electric or motorized wheelchair. The wheelchair includes a control module responsible for locally controlling and monitoring operation of the wheelchair, including collecting data associated with the various components (e.g., joystick, batteries, etc.) on the wheelchair. The control module is coupled to a modem for transmitting collected data to and receiving control data from a remote computer on which the TDP system executes. The modem and the remote computer exchange data over a data communication network, such as the wireless link 14 shown in FIG. 1 of Wakefield, II. The TDP system also provides a user interface module for enabling users of the remote computers to monitor data collected by the control module as well as input control commands to the module.

Turning now to the claims of the present application, it is believed that these claims are not anticipated by Wakefield, II for the reasons set forth below:

a. Independent Claims 1, 16, 23 and 28:

Claims 1 and 28 recite "analyzing the collected data to generate a data conclusion, the data conclusion being based on the data type of the collected data." Similarly, claim 16 recites "an intelligence module receiving the collected data from the data collector and *generating a data conclusion relating the collected data to an advisory rule corresponding to the data type.*"

Although Wakefield, II teaches the use of error codes to determine characteristics of faults occurring with a particular wheelchair, these error codes are not described in as complete detail as the "data conclusions" recited in these claims to warrant the requirements for

anticipation with respect to this particular element. Indeed, Wakefield, II does not teach, nor suggest, a process by which these error codes are generated, but rather only focuses on the use of the error codes by the remote computer. Namely, there is no teaching that the error codes are based on a specific data type, which is a limitation used to define how "data conclusions" are generated in accordance with the invention recited in claims 1, 16 and 28. As such, a correlation cannot be made between these prior art error codes and the data conclusions recited in claims 1 and 28.

Additionally, claims 1 and 28 have been amended to recite, "*responsive to the operation of mapping the data conclusion to time-critical advisory information, establishing a communication session with the management system*", wherein the time-critical advisory information is presented to the management system through the network device during the established communication session." Similarly, claim 16 recites, "a registration/communication module *automatically presenting* the advisory information to the management system if the escalation module determines that the collected data is associated with a time critical situation." Wakefield, II certainly does not teach such an "automatic" presentation of time-critical information. While Wakefield, II may teach a fault display screen for use in indicating faults with a wheelchair, Wakefield, II only teaches presenting such information to a user of the remote computer in response to the user initiating a troubleshooting or diagnostic session thereon. Thus, Wakefield, II actually teaches away from "automatic" presentation by disclosing user-initiated communication as being the only fashion in which time critical information, whether time-critical or not, may be presented to a user. For at least this reason, and those described above, claims 1, 16 and 28 are not anticipated by, and therefore believed allowable over, Wakefield, II.

Claim 23 recites "determining whether the collected data identifies a time-critical situation at the destination facility." Again, Wakefield, II teaches error codes which are created by a control module of a wheelchair, received by a remote computer and then matched by the remote computer to a detailed explanation of the error code for presentation to user. However, Wakefield, II does not teach, or even suggest, a process by which the remote computer or the wheelchair control module determine what data should result in an error code. As such, Wakefield, II cannot be used to show the "determining" act recited in claim 23.

Furthermore, claim 23 recites a unique combination of 1) "receiving a request from the management system to present the time-critical advisory information to the field service

provider," and in response to such a request, 2) "presenting the time-critical advisory information to the field service provider." With these acts, claim 23 generally recites the forwarding of time-critical advisory information to an appropriate field service provider *in response to such a request by a management module*. First and foremost, Wakefield, II does not teach a management system as an entity being responsible for one or more field service provider responsible for providing tasks at destination facilities. Second, Wakefield, II certainly does not teach, or even suggest, the forwarding of any type of information, whether time-critical or not, from the TDP system to another entity. Indeed, the remote computer is the *final presentation* of any information to any user of the TDP system. Thus, there is absolutely no teaching in Wakefield, II of a request to forward presented information to another. Because such an act is required by claim 23, and for all the reasons noted above, claim 23 is believed allowable over Wakefield, II.

b. Dependent Claims 2-15, 17-22, 24-27 and 29-34:

Claims 2-15 depend from claim 1, and hence, recite an invention that incorporates the same limitations of claim 1. For at least the reasons that claim 1 is believed allowable over Wakefield, II, claims 2-15 should also be allowed.

Claims 17-22 depend from claim 16, and hence, recite an invention that incorporates the same limitations of claim 16. For at least the reasons that claim 16 is believed allowable over Wakefield, II, claims 17-22 should also be allowed.

Claims 24-27 depend from claim 23, and hence, recite an invention that incorporates the same limitations of claim 23. For at least the reasons that claim 23 is believed allowable over Wakefield, II, claims 24-27 should also be allowed.

Claims 29-34 depend from claim 28, and hence, recite an invention that incorporates the same limitations of claim 28. For at least the reasons that claim 28 is believed allowable over Wakefield, II, claims 29-34 should also be allowed.

Furthermore, these dependent claims recite other limitations that are neither taught nor suggested by Wakefield, II. For example, claims 4, 21 and 31 recite the storage of advisory information, whether time-critical or not, to a specific data-type record of a specific customer account record. Wakefield, II does not teach storage of information into specific data-type records, and actually teaches away from such an implementation by teaching the collection of only one type of data - device data. Thus, there is no need to have different storage records for

each type of data. Additionally, claims 5, 22 and 32 recite the retrieval of advisory information from specific data-type records, and therefore recite further limitations that are not disclosed by Wakefield, II.

3. Moore

Moore is generally directed to a software enabled system for providing information related to automobile maintenance to the automobile owner/driver through a display screen. This information is derived, at least in part, from sensor data collected by sensors located on various points of the automobile. For example, Moore teaches placing a sensor on both the headlamp and the tailpipe of an automobile. Other forms of data which may be used to create the information presented on the display screen include data from information sources associated with the automobile industry. Like Wakefield, II, Moore does not go into detail as to the specific process for generating information for display on the display screen. Rather, Moore only teaches the collection of the aforementioned types of data and the end result of displaying information derived from the collected data on a display screen.

Turning now to the claims of the present application, it is believed that these claims are not anticipated by Moore for the reasons set forth below:

a. Independent Claims 1, 16, 23 and 28:

Each independent claim of the present application is generally directed to either a method or system wherein a management system is presented information related to a time-critical situation. In contrast, Moore is only directed to presenting information to an owner/driver of an automobile. Whereas the present application relates to the management of a service being performed at a destination facility, Moore is only concerned with a the direct presentation of information to the owner/driver of an automobile. Indeed, Moore does not teach providing service to a destination facility, and certainly does not teach the involvement of a management system in presenting information to others, wherein a management system is defined as an entity that oversees the operation of field service representatives actually providing a service to destination facilities.

More specifically, claims 1 and 28 each recite a method reciting acts of 1) analyzing collected data to generate a data conclusion *based specifically on the data type of the collected data*; and then 2) determining whether the collected data is associated with a time-critical

situation at the destination facility. Likewise, claim 16 recites "an intelligence module receiving the collected data from the data collector and *generating a data conclusion relating the collected data to an advisory rule corresponding to the data type*" and "an escalation module receiving the data conclusion and analyzing the data conclusion against an escalation rule *to determine whether the collected data is associated with a time-critical situation.*"

Although Moore does teach the sensing of data and notes the analysis of the sensed data using heuristic algorithms, Moore does not disclose the analysis of such data to generate a conclusion based specifically on the data type of the sensed data. Indeed, the "type" of the sensed data is not even mentioned in Moore. Moreover, Moore does not disclose, in any fashion, a determination by which sensed information is analyzed to determine whether a time-critical situation is occurring with an automobile. Indeed, the only information presented to the automobile user is information pertaining to operating parameters of the automobile or scheduled maintenance to the automobile. Claims 1, 16 and 28 each recite specific steps or components that must be performed or used in order to generate time-critical advisory information. Even if the information presented on the display screen of Moore may be considered to be an equivalent to "time-critical information," Moore does not describe the generation of such information in as much detail as recited in these claims. For at least these reasons, claims 1, 16 and 28 each recite the invention in such a detailed manner that cannot be anticipated by Moore.

Claim 23 recites an act of "determining whether the collected data identifies a time-critical situation at the destination facility," and if so, "mapping the data conclusion to time-critical advisory information." Again, Moore teaches presenting information in the form of service reminders and vehicle alerts to drivers/owners, but stops short of teaching any process whereby these service reminders and vehicle alerts are generated. In contrast, claim 23 actually recites specific steps that must be administered in order to generate time-critical advisory information. Thus, like claims 1, 16 and 28, even if the information presented on the display screen taught by Moore may be considered "time-critical information," Moore does not describe such information in as much detail as claimed in claim 23. Further, claim 23 recites "receiving a request from the management system to present the time-critical advisory information to the field service provider," and in response to such a request, "presenting the time-critical advisory information to the field service provider." As noted above while describing the general differences between Moore and the present application Moore does not teach using a

management entity to determine which information is presented to others, and further, does not teach presentation of information to field service providers, but rather only automobile owners/drivers. Indeed, Moore is strictly concerned with providing automobile owners/drivers with information concerning the maintenance of an automobile, and therefore, actually teaches away from having a third party entity being responsible for receiving the notification of such a service reminder. For at least these reasons, claim 23 is believed to recite an invention neither anticipated nor rendered obvious by Moore.

b. Dependent Claims 2-15, 17-22, 24-27 and 29-34:

Claims 2-15 depend from claim 1, and hence, recite an invention that incorporates the same limitations of claim 1. For at least the reasons that claim 1 is believed allowable over Moore, claims 2-15 should also be allowed.

Claims 17-22 depend from claim 16, and hence, recite an invention that incorporates the same limitations of claim 16. For at least the reasons that claim 16 is believed allowable over Moore, claims 17-22 should also be allowed.

Claims 24-27 depend from claim 23, and hence, recite an invention that incorporates the same limitations of claim 23. For at least the reasons that claim 23 is believed allowable over Moore, claims 24-27 should also be allowed.

Claims 29-34 depend from claim 28, and hence, recite an invention that incorporates the same limitations of claim 28. For at least the reasons that claim 28 is believed allowable over Moore, claims 29-34 should also be allowed.

Furthermore, these dependent claims recite other limitations that are neither taught nor suggested by Moore. For example, claims 4, 21 and 31 recite the storage of advisory information, whether time-critical or not, to a specific data-type record of a specific customer account record. Moore does not teach storage of information into customer account records, and actually teaches away from such an implementation by teaching the presentation of information to only one entity - the owner/driver of the automobile. Thus, there is no need to have different storage records for multiple entities. Additionally, claims 5, 22 and 32 recite the retrieval of advisory information from customer account records, and therefore recite further limitations that are not disclosed by Moore.

4. Moore et al.

Moore et al. is generally directed to servicing elevator systems using an computer-implemented expert system having a knowledge base of elevator trouble-shooting information. The expert system resides at a centralized location in order to service a plurality of remotely located elevator systems. A terminal is located at each elevator system in order to provide a communication link to the expert system. A field service technician servicing an elevator system inputs sensed data relating a malfunction of the elevator system, and in response to receiving this input data, the expert system analyzes the data to generate and subsequently transmit to the field technician possible causes of the malfunction. Thus, Moore et al. describe the expert system as a device for providing a computer-implemented equivalent of the "most able, most experienced service person as an immediately available consultant for field technicians, whose expertise would not be lost by retirement."

Turning now to the claims of the present application, it is believed that these claims are not anticipated by Moore et al. for the reasons set forth below:

a. Independent Claims 1, 16, 23 and 28:

Turning now to the claims at issue, claims 1 and 28 recite, "*responsive to the operation of mapping the data conclusion to time-critical advisory information, establishing a communication session with the management system*, wherein the time-critical advisory information is presented to the management system through the network device during the established communication session." Similarly, claim 16 recites, "a registration/communication module *automatically presenting* the advisory information to the management system if the escalation module determines that the collected data is associated with a time critical situation." Moore et al. does not teach such an "automatic" presentation of time-critical information, but rather is directed to an expert system that provides consulting services to field service technicians *only* in response to a user-initiated help session. That is, the system taught by Moore et al. is no different than any other computing system that provides a troubleshooting resource to users in response to research queries or data input by the users. Moore et al. therefore fails to teach at least one limitation of claims 1, 16 and 28, and for at least this reason, these claims are believed allowable over Moore et al.

Furthermore, claims 1 and 28 each recite an act of *determining whether the collected data is associated with a time-critical situation* at a destination facility. Likewise, claim 16 recites an escalation module that performs an analysis *to determine whether the collected data is associated with a time-critical situation*. In contrast, the expert system taught by Moore et al. simply receives data representing malfunction symptoms of an elevator *input by a field technician* and matches the data to possible causes of the malfunction. At the time the malfunction-related data is input to the system, the field technician is already aware of a malfunction, i.e., a possible time-critical situation, occurring at the elevator system. In fact, the malfunction is the reason the field technician has arrived at the elevator system in the first place. As such, there is no need for the expert system to determine whether a malfunction is occurring at the elevator location. The expert system is *only used* to assist the technician in fixing the malfunction. Moore et al. only teaches a means for addressing malfunctions, and not alerting users of such, and therefore, does not only fail to teach, but fails to suggest, any process or act for determining whether collected data indicates a time-critical situation occurring at an elevator system or any other destination facility. For at least the reasons noted in this and the preceding paragraph, claims 1, 16 and 28 are believed to clearly distinguish the present invention from Moore et al.

As with claims 1, 16 and 28, claim 23 also recites an act of *determining whether collected data is associated with a time-critical situation* at a destination facility. As noted in the preceding paragraph, Moore et al. does not teach, or even suggest, this particular act. Therefore, claim 23 is not anticipated by, and therefore believed allowable over, Moore et al.

Claim 23 is further distinguished from Moore et al in that claim 23 recites a unique combination of the following acts: 1) "receiving a request from the management system to present the time-critical advisory information to the field service provider," and in response to such a request, 2) "presenting the time-critical advisory information to the field service provider." As such, claim 23 generally recites the forwarding of time-critical advisory information to an appropriate field service provider in response to such a request by a management module. In contrast, II, Moore et al. does not teach, or even suggest, the forwarding of time critical information from a management entity to a field service provider. Indeed, the expert system is the final presentation of any information to any user of the system. Thus, there is absolutely no teaching of a request to forward presented information to another. Because such

an act is required by claim 23, and for all the reasons noted above, claim 23 is believed allowable over Moore et al. Moreover, the purpose of these two acts (i.e., the "receiving" and subsequent "presenting" acts) is to place an appropriate field technician on notice of a time-critical situation at a destination facility. As described in detail above, Moore et al. is not directed to alerting a technician that an elevator system, or component thereof, is malfunctioning. Thus, not only does Moore et al. fail to teach these two acts, but Moore et al. is directed to a completely different problem than that of the present invention.

b. Dependent Claims 2-15, 17-22, 24-27 and 29-34:

Claims 2-15 depend from claim 1, and hence, recite an invention that incorporates the same limitations of claim 1. For at least the reasons that claim 1 is believed allowable over Moore et al., claims 2-15 should also be allowed.

Claims 29-34 depend from claim 28, and hence, recite an invention that incorporates the same limitations of claim 28. For at least the reasons that claim 28 is believed allowable over Moore et al., claims 29-34 should also be allowed.

Claims 17-22 depend from claim 16, and hence, recite an invention that incorporates the same limitations of claim 16. For at least the reasons that claim 16 is believed allowable over Moore et al., claims 17-22 should also be allowed.

Claims 24-27 depend from claim 23, and hence, recite an invention that incorporates the same limitations of claim 23. For at least the reasons that claim 23 is believed allowable over Moore et al. claims 24-27 should also be allowed.

Furthermore, these dependent claims recite other limitations that are neither taught nor suggested by Moore et al. For example, claims 4, 21 and 31 recite the storage of advisory information, whether time-critical or not, to a specific data-type record of a specific customer account record. Moore et al. does not teach storage of information into any type of specific record, be it a customer account record or a data-type record. Again, the expert system taught by Moore et al. is only used as a computer-implemented consultant for use by field technicians in servicing elevators. The expert system does not store information specific to each elevator system, but rather the system is used on a consultant basis to assist field technicians with general questions regarding elevator operation. Therefore, there is no need to have different storage records for each type of data. Additionally, claims 5, 22 and 32 recite the retrieval of advisory

information from specific data type and customer account records, and therefore recite further limitations that are not disclosed by Moore et al.

CONCLUSION


This Amendment is believed to be responsive to all points raised in the Office Action mailed March 31, 2003. Still, the Office Action may contain other arguments that are not directly addressed by this Amendment due to the fact that they are rendered moot in light of the preceding arguments in favor of patentability. Hence, failure of this Amendment to directly address an argument raised in the Office Action should not be taken as an indication that the Applicants believe the argument to have merit. Furthermore, the claims of the present application may include other elements, not discussed in this Amendment, that are not shown, taught, or otherwise suggested by the art of record. Accordingly, the preceding arguments in favor of patentability are advanced without prejudice to other bases of patentability.

Claims 1-34 are pending in the application and are believed to clearly be allowable over the art of record for at least the reasons stated above. Accordingly, prompt allowance and passage of the application to issue are earnestly solicited. Should the Examiner have any remaining questions or concerns, he/she is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns. No fees are believed due with this Amendment. However, if this is not the case, please charge any additional fee to Deposit Account No. 13-2725. Additionally, please credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

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